Geophysical Research Abstracts,
Vol. 11, EGU2009-637-1, 2009
EGU General Assembly 2009


# Organic Geochemistry of Asphaltite Occurences in Southeast Anatolia, Turkey

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The southeastern Anatolia region hosts the important asphaltite deposits (Avgamasya, Seridahle and Herbol) in Turkey. In this study organic geochemical characteristics of asphaltite, depositional environments of their source rocks were interpreted. Correlations of asphaltites were performed.
Avgamasya-5 and Herbol-7 asphaltite samples have very similar saturated, aromatic and polar compound contents. The Seridahle-5 asphaltite sample is represented by very low asphaltene and polar compounds and higher amounts of saturated compounds. Except for Seridahle asphaltite sample, [U+F064]13C values of two asphaltite samples are very close. In all asphaltite samples, a unimodal distribution with low numbered n-alkanes is observed. In gas chromatograms of Avgamasya-5, Herbol-7 and Seridahle-5 asphaltite samples n-alkanes are recorded as the dominant compounds. In Herbol-7 and Avgamasya-5 samples compounds are in low abundance while in the gas chromatogram of the Seridahle-5 asphaltite sample n-alkanes and other compounds are measured in higher abundances in comparison to other asphaltite samples. Asphaltite samples show similar C27, C28 and C29 sterane distribution with C29 as the dominant sterane. Higher diasterane/sterane, Ts/(Ts+Tm) and lower C29/C30 hopane ratios for all asphaltite samples indicate that their source rocks lithology is carbonate. The higher C31-R homohopane/C30 hopane ratios (>0.25) indicate a marine source for all asphaltite samples. According to [U+F062][U+F062]/([U+F062][U+F062]+[U+F061][U+F061]), 20S/(20R+20R) C29 sterane, 22S/(22S+22R) C31 homohopane and moretane/hopane ratios, all asphaltites are mature. The degree of biodegradation was found as slight for the Avgamasya and Herbol asphaltites and very slight for the Seridahle asphaltites.